

Panasonic
ideas for life

POWER ROCKER SWITCH

J8 SWITCHES WITH TRIP FUNCTION UPGRADED TYPE



FEATURES

1. Power switches with an electromagnetic reset function which meet the need for energy savings in equipment and for safety.

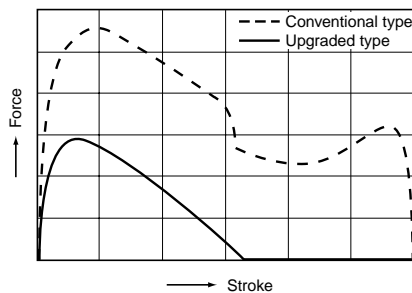
Applications for these switches include promoting energy savings in equipment (by reducing power consumption when OA equipment is in standby mode, for example), preventing fires caused by overheating of a heater inside equipment, preventing electrical leaks, and automatically turning off the power if the unit tips over or is shaken. These switches feature a built-in electromagnetic reset function

that shuts off the main power supply in response to a signal that is received from an external sensor.

2. A dramatic upgrade in operation feelings

These switches provide the same comfortable operation feelings our conventional J8 switches.

- Comparison of feel when switch is turned on

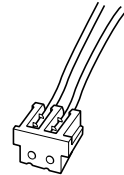


3. CT terminals adopted for coil terminals

These switches can be used with AMP's CT connectors, which are widely used for wiring connections in OA equipment,

making it possible to achieve greater efficiency in wiring work.

Receptacle for AMP's CT connector



receptacle socket

4. Prolonged electrical service life.

Coil operation provides an electrical life of at least 50,000 switching operations.

5. Assures excellent ability to withstand inrush current when used to turn a power supply on/off.

The switch uses our own proprietary mechanism that provides an excellent ability to withstand inrush current is employed.

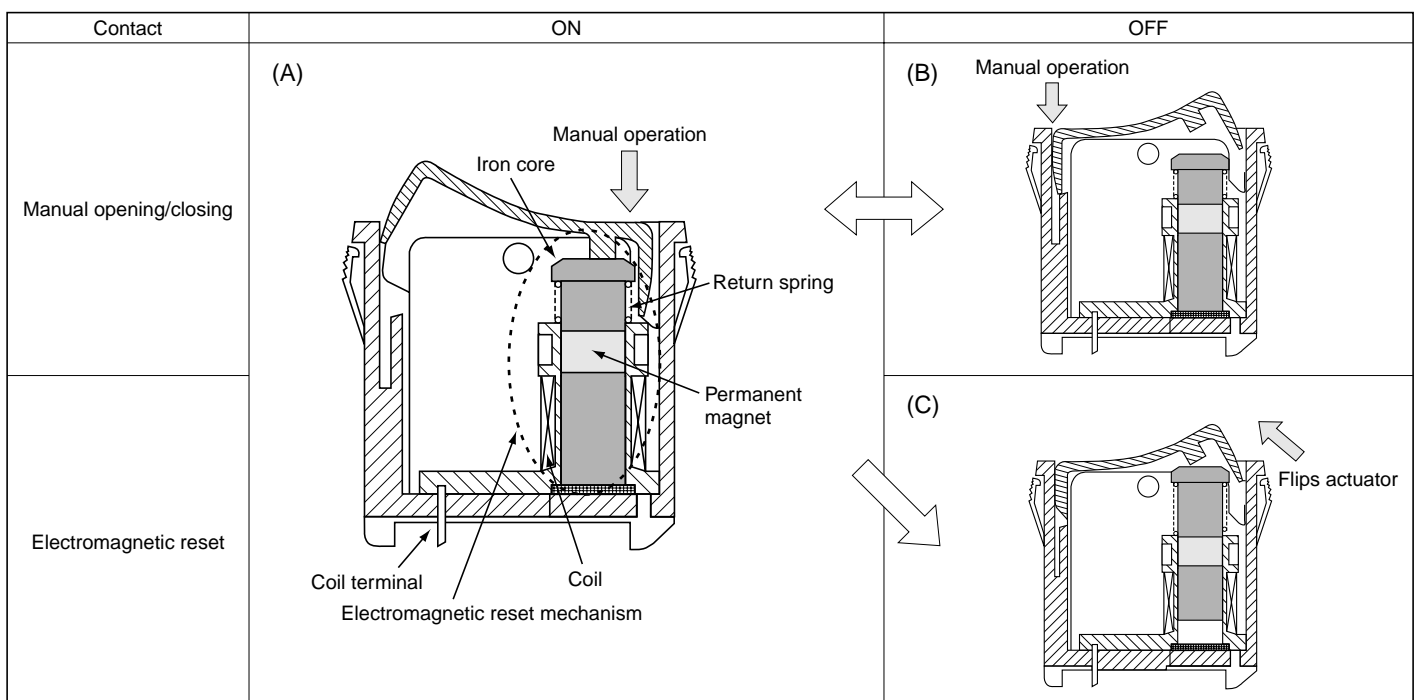
Inrush current rating (IEC65) : 160A (normally 16A at 125V AC), 10,000 times

6. Approved under major international safety standards.

UL, cUL, TÜV and SEMKO approved.

OPERATING PRINCIPLE

- Manual operation is a repetition of (A) and (B) .
This operation is independent of the electromagnetic reset function.
- The reset mechanism operates only when an electromagnetic reset has occurred. (C)



ORDERING INFORMATION

Ex. AJ8R

1

0




0


1

Z

B

C

Type of switch	Operating type	Terminal shape	Actuator indication	Coil voltage	Actuator color	Flange color	Insulation guard
AJ8R: J8 switch with trip function	1: Single pole (ON-OFF) 2: Double pole (ON-OFF) 5: Single pole (ON-ON)	0: .250 Quick-connect terminal	0:  1:  2: 	1: DC 5V 3: DC 12V 4: DC 24V	Z: Dark gray B: Black	Nil: Dark gray B: Black	C: Upgraded type

Remarks: 1. They come with a stamp indicating international standards without your request.
2. The color of  indication on the actuator is white.

PRODUCT TYPES

Remarks: Standard actuator color is dark gray and black.
To order switches with a black actuator, replace the letter "Z" with "B" in the product numbers shown below when ordering.

(Ex.)
AJ8R1001ZC (Actuator color: Dark gray Flange color: Dark gray)
→ AJ8R1001BC (Actuator color: Black Flange color: Dark gray)

1. Without indication on actuators (Actuator color: Dark gray)

Pole	Operation type	Coil voltage	Flange color: Dark gray	Flange color: Black
Single pole	ON-OFF	5V DC	AJ8R1001ZC	AJ8R1001ZBC
		12V DC	AJ8R1003ZC	AJ8R1003ZBC
		24V DC	AJ8R1004ZC	AJ8R1004ZBC
	ON-ON	5V DC	AJ8R5001ZC	AJ8R5001ZBC
		12V DC	AJ8R5003ZC	AJ8R5003ZBC
		24V DC	AJ8R5004ZC	AJ8R5004ZBC
Double pole	ON-OFF	5V DC	AJ8R2001ZC	AJ8R2001ZBC
		12V DC	AJ8R2003ZC	AJ8R2003ZBC
		24V DC	AJ8R2004ZC	AJ8R2004ZBC

2. With |O indications on actuators (Actuator color: Dark gray)

Pole	Operation type	Coil voltage	Flange color: Dark gray	Flange color: Black
Single pole	ON-OFF	5V DC	AJ8R1011ZC	AJ8R1011ZBC
		12V DC	AJ8R1013ZC	AJ8R1013ZBC
		24V DC	AJ8R1014ZC	AJ8R1014ZBC
	ON-ON	5V DC	AJ8R5011ZC	AJ8R5011ZBC
		12V DC	AJ8R5013ZC	AJ8R5013ZBC
		24V DC	AJ8R5014ZC	AJ8R5014ZBC
Double pole	ON-OFF	5V DC	AJ8R2011ZC	AJ8R2011ZBC
		12V DC	AJ8R2013ZC	AJ8R2013ZBC
		24V DC	AJ8R2014ZC	AJ8R2014ZBC

3. With -O indications on actuators (Actuator color: Dark gray)

Pole	Operation type	Coil voltage	Flange color: Dark gray	Flange color: Black
Single pole	ON-OFF	5V DC	AJ8R1021ZC	AJ8R1021ZBC
		12V DC	AJ8R1023ZC	AJ8R1023ZBC
		24V DC	AJ8R1024ZC	AJ8R1024ZBC
	ON-ON	5V DC	AJ8R5021ZC	AJ8R5021ZBC
		12V DC	AJ8R5023ZC	AJ8R5023ZBC
		24V DC	AJ8R5024ZC	AJ8R5024ZBC
Double pole	ON-OFF	5V DC	AJ8R2021ZC	AJ8R2021ZBC
		12V DC	AJ8R2023ZC	AJ8R2023ZBC
		24V DC	AJ8R2024ZC	AJ8R2024ZBC

SPECIFICATIONS

1. Contact rating

Voltage	Resistive load (pf = 1)	Motor load (EN61058-1) (pf = 0.6)	Inrush load
125V AC	16A	—	160A (8.3ms)
125V AC	10A	4A	—

Remark: The motor load is in accordance with EN61058-1. Inrush current can be switched up to the value of 6 times the indicated rating.

2. Coil rating

Nominal Voltage *(Max. 10 sec)	Drop-out voltage (at 20°C 68° F)	Nominal operating current [±10%] (at 20°C 68° F)	Coil resistance [±10%] (at 20°C 68° F)	Maximum voltage (Max. 1 sec)
5V DC	Max.4.5V Min.0.5V	725mA	6.9Ω	5.5V
12V DC	Max.10.8V Min.1.2V	300mA	40Ω	13.2V
24V DC	Max.21.6V Min.2.4V	150mA	160Ω	26.4V

Remark: If the rated voltage is applied to the coil for more than ten seconds or the maximum voltage is applied for more than one second, coil performance will deteriorate.

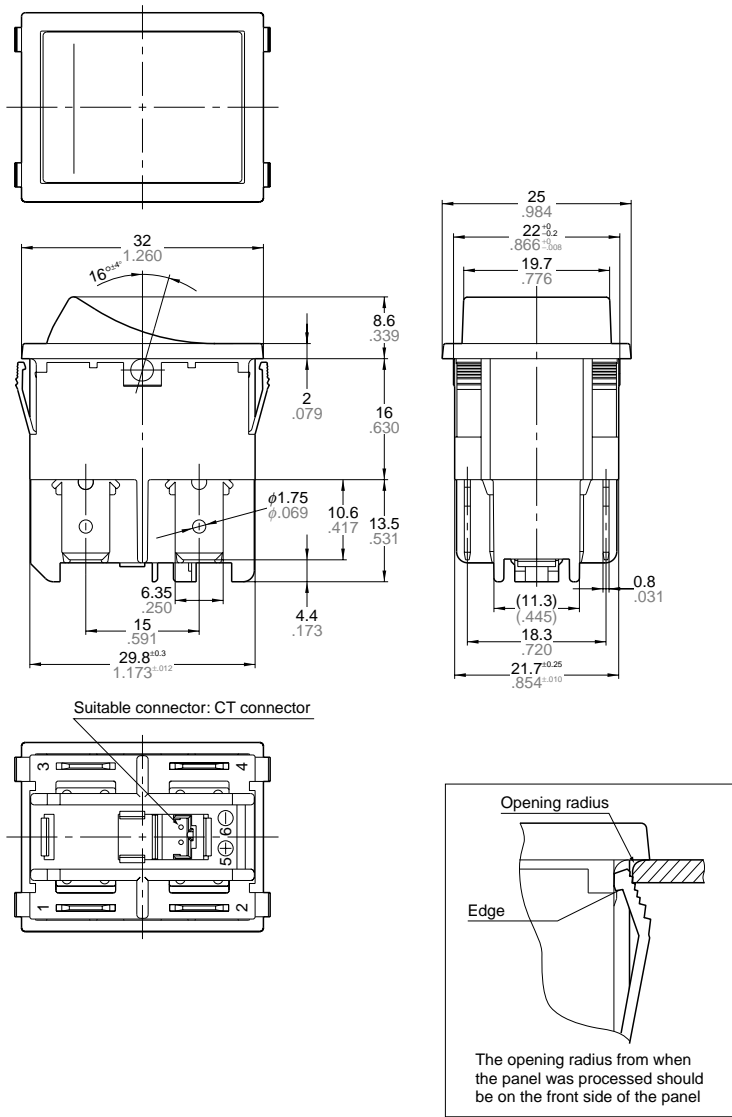
3. Characteristics

Electrical life	Manual operation	Min.10 ⁴ (at 7 cpm.,at rated load)
	Coil operation	Min.10 ³ (at 7 cpm.,at rated load) Min.5×10 ⁴ (at 7 cpm. 5A 125V AC resistive load)
Mechanical life		Min.5×10 ⁴ (at 20 cpm.)
Initial contact resistance (By voltage drop at 1A, 2 to 4V DC)		Max. 100mΩ
Initial insulation resistance		Min. 100mΩ (at 500V DC measured by insulation resistive meter)
Initial breakdown voltage	Between contacts	2,000 Vrms
	Between coil and contact	4,000 Vrms
Ambient temperature		0°C to +60°C 32° F to +140° F (Not freezing below 0°C 32° F)
Ambient humidity		Max. 85% R.H.
Vibration resistance		10 to 55 Hz at single amplitude of 0.75mm
Shock resistance	Functional	Min.294m/s ² {30G} (Contact opening Max. 1ms)
	Destructive	Min.980m/s ² {100G}
Tensile terminal strength		.250 Quick-connect terminal Min. 98N{10kgf}/min. (Pull & push direction)
Actuator strength		39.2N{4kgf} for 1min. operating direction
Contact release time		Max. 100ms (at rated voltage)
Initial operating force * Reference value		4.9N or less (Max. 500gf or less) Setting force after reset has been released: Max. 6.86N or less (Max. 700gf or less)
Flame retardancy		UL94V-0
Tracking resistance		Min. 175
Unit weight		Single pole, single throw: Approx. 17g .60oz Single pole, double throw: Approx. 19g .67oz Double pole, single throw: Approx. 20g .71oz

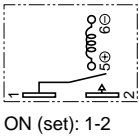
Remark: Test conditions are in accordance with EN61058-1,UL1054 and JIS C 6571

DIMENSIONS

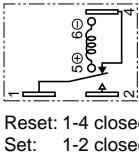
Double pole (ON-OFF)



Wiring diagram(Bottom view)
Single pole (ON-OFF)



Single pole (ON-ON)



Double pole (ON-OFF)

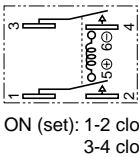
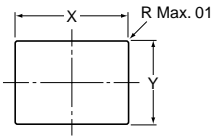


Diagram of recommended locations for
panel mounting holes



Panel thickness	X	Y
1 to less than 1.8 .039 to .071	30.4 ⁺⁰ _{-0.1} 1.197 ⁺⁰ _{-.004}	22.0 ^{+0.1} ₋₀ .866 ^{+0.004} ₋₀
1.8 to 2.3 .071 to .091	31.1 ⁺⁰ _{-0.1} 1.224 ⁺⁰ _{-.004}	22.0 ^{+0.1} ₋₀ .866 ^{+0.004} ₋₀

Remark: Contact us if you are considering
using a panel of other than the rec-
ommended size and shape.

- Remarks:
1. The external dimensions and mounting dimensions for the single pole, single throw type and the single pole, double throw type are the same as those for the double pole, single throw type indicated above.
 2. The figures show the double pole, single throw (ON-OFF) type as an example.
The contact terminals are 1, 2, 3, and 4.
In the case of the single pole, single throw (ON-OFF) type, the contact terminals are 1 and 2.
In the case of the single pole, double throw (ON-ON) type, the contact terminals are 1, 2, and 4.
There are no other terminals.
Refer to the internal wiring diagram.
 3. The coil is a polarized coil; coil terminal 5 is positive and coil terminal 6 is negative.

NOTES

1. Operating voltage application time

If the rated voltage is applied to the coil for more than 10 seconds or the maximum voltage is applied for more than 1 second, coil performance may deteriorate.

2. The shape of the mounting panel should be as recommended in the dimensions diagram.

Contact us if you are considering using a panel of other than the recommended size and shape.

3. The mounting panel should be made of SPCC. If a different material is used, its adhesion to the switch unit may not be as strong. Check this on site if necessary.

4. Note that the actuator could pop out of the switch housing if 19.6N (2kgf) or more of force is applied to the side of the actuator.

5.

(1) When connecting the tab terminals, use a .250 receptacle and insert the terminals straight in.

If you insert them at an angle, the terminals could catch on the opening and will require greater insertion force.

(2) The coil terminals have specific polarities. Make sure you connect them correctly.

(3) Use a receptacle that is compliant with JIS C 2809.

In addition, there is some deviation regarding the insertion force depending on the model used from different manufacturers, so the insertion force should be checked under realistic conditions.

(4) Use AMP's CT connector for the coil terminals.

6. Because special receptacle terminals are used for the contact terminals and the common terminals, do not attempt to solder them. Doing so could melt plastic components and otherwise harm the performance of the switch

7. The terminals should be connected in such a way that they are not under constant stress from the connecting wires.

8. Take care not to drop the product as it may impair performance.

9. Resistance to chemicals

To clean the switch unit, use a neutral detergent diluted with water.

Do not use acidic or alkaline solvents as they may damage the switch.

Furthermore, be careful not to get any of the detergent solution inside of the switch while cleaning it.

10. This product is not hermetically sealed, so its performance could deteriorate under certain ambient conditions. Avoid using and storing these switches in a location where they will be exposed to corrosive gases, silicon, or high dust levels, all of which can have an adverse effect on the contacts. In addition, because these switches contain permanent magnets, avoid using and storing these switches in a location where metallic dust, etc., is present.

11. When these switches are used with weak currents of 500mA or less, a layer of material on the surface of the contacts may cause contact instability. Check and evaluate this possibility before using these switches under such conditions.

12. When using an ON-OFF type switch with no (I/O) indication on the actuator, the "OFF" position should be indicated on the set in which the switch is installed.

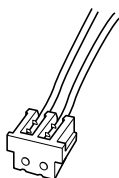
13. To assure reliability, check the switch under actual loading conditions. Avoid any situation that may adversely affect switching performance.

COIL TERMINAL CONNECTOR

Because CT terminals are used for the coil terminals, AMP's CT connector can be used.

Remark: We do not sell this type of connector. Questions concerning this connector should be directed to the manufacturer.

AMP's CT connector



receptacle socket

Pressure welding type:

173977-2: for AWG26, 28

2-179694-2: for AWG24

Crimping type:

179228-2